

The southernmost occurrences of *I. gracile* represented among specimens seen are:

SOUTH CAROLINA: Aiken, *Ravenel*, September, 1869 (U. S. N. H.)

ALABAMA: Auburn, *Pollard & Maxon*, July 9-11, 1900 (U. S. N. H.)

ARKANSAS: Texarkana, *Heller*, August, 1898 (N. Y. B. G.)

The ranges of the two species thus barely overlap.

PALEONTOLOGY.—*Revision of the names of three fossils from the Castle Hayne and Trent marls in North Carolina.*¹ L. B. KELLUM, University of Michigan. (Communicated by C. WYTHE COOKE.)

In Professional Paper 143 of the United States Geological Survey, 1926, the writer described a number of new species of invertebrate fossils from the Castle Hayne and Trent marls of North Carolina. His attention has since been called to the preoccupation of two of the specific names used in that paper, and to an earlier description of a species which he described and named as new. The names incorrectly used in Professional Paper 143 are *Cassidulus berryi* Kellum, applied to an echinoid from the Castle Hayne marl, *Terebratula crassa* Kellum, for a brachiopod from the Trent marl, and *Macrocallista minuscula* Kellum, applied to a mollusk from the Trent marl. New specific names are therefore proposed for the first two of these fossils and an earlier name replaces the third.

***Cassidulus (Pygorhynchus) sabistonensis* Kellum, nom. nov.**

New name for *C. berryi* Kellum, 1926, described and figured in U. S. G. S. Prof. Paper 143: 15, pl. 1, f. 4-7. The specific name *berryi* was used by M. W. TWITCHELL in 1915 for a *Cassidulus* occurring in the Waccamaw marl at Neills Eddy Landing, Cape Fear River, N. C. This was published in U. S. G. S. Monograph 54 on *The Mesozoic and Cenozoic Echinodermata of the United States*. As the name is therefore preoccupied in this genus, I propose the specific name *sabistonensis* for the form collected two miles north of Jacksonville, Onslow County, N. C. on the farm of E. W. SABISTON.

***Terebratula posteriora* Kellum, nom. nov.**

New name for *T. crassa* Kellum 1926. The specific name *crassa* is preoccupied in this genus, having been used by D'ARCHIAC in 1846. The writer's attention was called to this fact by WILLIAM HEALEY DALL in a letter dated October 20, 1926. Dr. DALL says: "Now there is an earlier *Terebratula crassa* of D'Archiac 1846; see Soc. Geol. France mém. 2me ser. 2, p. 318, pl. 18, figs. 8a-d, 9—according to CARUS and ENGLEMANN."

As this new species from North Carolina has been found at only one locality and all specimens collected are broken along the anterior margin, the new name *posteriora* is indicative of the part of the shell usually preserved.

***Callista (Callista) nuesensis* (Harris)**

Synonym: Macrocallista minuscula Kellum 1926. This species was described and figured by G. D. HARRIS in 1919 in the Bulletin of American

¹ Received December 17, 1930.

Paleontology vol. 6, No. 31, p. 136, pl. 43, figs. 4-7, 10, as *Meretrix neusensis* In February 1927, KATHERINE VAN WINKLE PALMER in a monographic study of the Veneridae of Eastern America, Vol. 1, No. 5, assigned this species to the genus *Callista*. The specimens figured by these authors are casts of the interior and exterior, except for one pseudomorph. The valve figured by the writer in Prof. Paper 143, pl. 10, figs. 1-2, is an almost perfectly preserved shell.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

THE ACADEMY

236TH MEETING

The 236th meeting of the ACADEMY was held in the Assembly Hall of the Cosmos Club on Thursday, December 18, 1930. About ninety persons were present. President BOWIE called the meeting to order at 8:15 and introduced the speaker of the evening, Prof. A. M. BANTA of Brown University and Research Associate of the Carnegie Institution.

Program: A. M. BANTA: *What the crustacean tells us about evolution.*—Studies in parthenogenetic inheritance in *Cladocera* have revealed the occurrence of certain mutations—some morphological, others physiological in their effects. By means of selection some of these changes have been progressively increased or decreased in accord with the direction sought in selection. Since selection and return selection have been successful in whichever direction attempted, it appears that further genetic changes (new mutations) are occurring. Such derivation of two different and relatively stable types from a single ancestor seems to represent evolution in its simplest form and it is believed that these studies may throw some light upon one of the methods of evolution.

As one of the results of the study of some of the mutant characters in *Daphnia longispina* in sexual reproduction it was found that the characters studied were inherited, as anticipated, in typical mendelian fashion. An unexpected result of the studies in sexual reproduction was the finding of evidence that many physiological mutations occur during parthenogenesis. Further studies on this point have shown that after a long and uninterrupted succession of parthenogenetic generations, numerous lethal, sublethal and other physiological recessive mutations (not present or present in very limited numbers in the early parthenogenetic generations) have accumulated during the long period of parthenogenesis. This was demonstrated by (1) inbreeding among the members of a parthenogenetic pure line or clone early in its parthenogenetic history and (2) again after the lapse of a large number of parthenogenetic generations. Few of these recessive lethal and other physiological characters manifest themselves in the early inbreeding; many manifest their presence in the later inbreeding experiments.

One character, "thermal," which appeared in the inbreeding of a clone long parthenogenetic was of more than usual interest. It is a recessive which presumably occurred as a mutation during parthenogenesis but in simplex or heterozygous condition and manifested itself only when it became duplex or homozygous in one of the sexually produced offspring derived from inbreeding the clone involved. Individuals of this derived thermal clone were more resistant to high temperatures, less resistant to lower temperatures, had a